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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/430,267	10/29/1999	JANAKIRAMAN SENTHILNATHAN	99.360	7015

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EXAMINER

WILSON, ROBERT W

ART UNIT	PAPER NUMBER
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2661

DATE MAILED: 12/31/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/430,267

Applicant(s)

SENTHILNATHAN ET AL. 

Examiner

Robert W Wilson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 29 October 1999.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3,8-11 and 15-19 is/are rejected.
- 7) ☒ Claim(s) 4-7 and 12-14 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All   b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)                      4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)                      5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 6.                      6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

**1.0** The application of Janakiraman Senthilnathan et al for a "METHOD AND APPARATUS FOR SELECTION OF AN ENDPOINT DEVICE IN A POINT TO POINT LINK" filed October 29, 1999 without foreign priority and consisting of claims 1-19 have been examined.

#### ***Foreign Priority***

**2.0** No Foreign Priority was claimed.

#### ***Drawings***

**3.0** The drawings in this application are objected to by the Draftsperson as informal. Any drawing corrections requested, but not made in the prior application should be repeated in this application if such changes are still desired. If the drawings were changed and approved during the prosecution of the prior application, a petition may be filed under 37 CFR 1.182 requesting the transfer of such drawings, provided the parent application has been abandoned. However, a copy of the drawings as originally filed must be included in the 37 CFR 1.60 application papers to indicate the original content.

#### ***Claim Objections***

**4.0** Claims 4-7 and 12-14 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims as well as resolving the 112/2 paragraph issues.

Referring to Claim 4; the limitation of "multicast message" and "predetermined time-out" was not found in the documents of record; since, claims 5-7 depend upon claim 3 they would also be allowable.

Referring to Claims 12 and 14; the limitation of "multicast message" with "having a predetermined message type" was not found in the documents of record; since, claims 13 depends upon claim 12 it would also be allowable.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

**5.0** Claims 17-19 are rejected relative to 112/2 paragraphs as being so broad that the metes and the bounds of the claims cannot be assessed.

**For Example:**

Referring to Claims 17, What is meant by “first predetermined type of message type”, “second predetermined type of message”, “third predetermined type of message”, first network device”, “second network device”, or “third network device”? These terms are so broad that they preclude a search to be performed.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

**6.0** Claims 17-19 are rejected relative to 112/1<sup>st</sup> paragraphs because the limitations are so broad that they do not allow one of ordinary skill in the art to practice the invention.

**For Example:**

Figures 5-11 teach signaling between the Client, Tunnel Initiator, Endpoint Database, Tunnel Endpoint, and Server.

How does one practice the invention with the claim limitations “database device”, first predetermined type of message type”, “second predetermined type of message”, “third predetermined type of message”, first network device”, “second network device”, or “third network device”? These limitations are so vague that they cannot be related to

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the Figures 5-11; consequently, one of ordinary skill in the art cannot practice the invention.

### ***Specification***

**7.0** The disclosure is objected to because of the following informalities: the specification contains a hyperlink on page 2 line 12. The examiner recommends the removal of the “www” and with a word replacement of “World Wide Web”. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**8.0** Claims 1-2, 8-11, 15, and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Derby et al (U.S. Patent No.: 5,426,637).

Referring to Claim 1, Derby teaches: endpoints (destination per col 2 line 67); communication system (communication networks per col 1 lines 7-8); receiving a connection request from a client (A terminal connected to LAN A or element 11 in Figure 11 desires to communicate with terminal on LAN B or element 12 per Fig 11); responsive to the connection request, querying a database for a database entry matching the client using predetermined identifying information where the matching database entry will include an identifier for the endpoint (In response to the connection for LAN A to communicate with LAN B, the ADDRESS CACHE 24 is queried for the path to LAN B based upon the ADDRESS of LAN A. If the ADDRESS for LAN B is found a connection is established per Figs 1-10);

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Responsive to not receiving a database reply; establishing a connection for the client to a locally determined endpoint, and updating the database to include a database entry that includes the predetermined identifying information for the client and an identifier for the locally determined end point (If there is not an address or identifier for the LAN B in the ADDRESS CACHE element 24 then a request is made locally from the ADDRESS CACHE element 24 to the DIRECTORY SERVICES element 22 per Fig 2. If the address for LAN B is not in the DIRECTORY SERVICES element 22 then query is made as shown in Fig 10 to ESTABLISH CONNECTION element 140 and CONNECTION TABLE UPDATE per Fig 10.)

**In Addition:**

Querying a database for a database entry matching the client includes querying a local database (ADDRESS CACHE element 24 per Fig 2) and if none is found querying a remote database for a matching entry (DIRECTORY SERVICES per element 22 per Fig 2) as claimed in **Claim 2**.

Receiving another connection request from the client (Another terminal on LAN A desires to communicate with another terminal on LAN B per Fig 1); responsive to another connection request and using the predetermined identifying information for the client querying the database for the database entry that includes the predetermined identifying information for the client and the identifier for the locally determined endpoint (A terminal connected to LAN A or element 11 in Figure 11 desires to communicate with terminal on LAN B or element 12 per Fig 11); responsive to the connection request, querying a database for a database entry matching the client using predetermined identifying information where the matching database entry will include an identifier for the endpoint (In response to the connection for LAN A to communicate with LAN B, the ADDRESS CACHE 24 is queried for the path to LAN B based upon the ADDRESS of LAN A. If the ADDRESS for LAN B is found a connection is established per Figs 1-10);

Responsive to the database reply including the identifier for the locally determined endpoint, establish another connection for the client to the locally determined endpoint In

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response to the connection for LAN A to communicate with LAN B, the ADDRESS CACHE 24 is queried for the path to LAN B based upon the ADDRESS of LAN A. If the ADDRESS for LAN B is found a connection is established per Figs 1-10) as claimed in **Claim 8**.

Computer readable medium having stored therein instructions for causing a central processing unit to execute the method of claim 1 ( The WAN ACCESS NODE element 15 has an ADDRESS CACHE element 24 which would indicate to one of ordinary skill in the art that the WAN ACCESS NODE contains computer readable medium having instructions which are executed by a processing unit as shown in Fig. 2) as claimed in **Claim 9**.

Derby does not particularly call for: endpoint identifier but teaches MAC Header per col 4 line 44 and WAN destination address per col 5 lines 60-61)

It would be obvious to one of ordinary skill in the art at the time of the invention that the endpoint identifier is a WAN destination address it performs the same function.

Referring to claim 10, Derby teaches: network communication system (communication networks per col 1 lines 7-8); Database device configured to store a data entry (ADDRESS CACHE element 24 and DIRECTORY SERVICES 22 per Fig 2); where the data entry is keyed by predetermined client identifying information and includes an endpoint identifier field (ADDRESS CACHE element 24 and DIRECTORY SERVICES 22 per Fig 2); the database device being further configured to receive a database query that includes a client identifying value (ADDRESS CACHE element 24 contains MAC addresses whereas the DIRECTORY SERVICES element 22 contains WAN destination addresses and each supports queries respectively as shown in Fig 2); search for matching data entry that matches the client identifying value (ADDRESS CACHE element 24 contains MAC addresses whereas the DIRECTORY SERVICES element 22 contains WAN destination addresses and each supports queries respectively as shown in Fig 2); and if the matching data entry is found, send a database reply that includes the value of the endpoint identifier field of the matching data entry (ADDRESS CACHE element 24 contains MAC addresses whereas the DIRECTORY

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SERVICES element 22 contains WAN destination addresses and each supports queries and if there is a match relative to the queries a connection is setup as shown in Fig 2);

Network device (WAN ACCESS NODE or element 15 as shown in Fig 2) for receiving a call request from a client (Receives a connection request from LAN A element 11 to LAN B element 12 as shown in Fig 11); generates a database query having the client identifying information value for the client from the call request is received and where the network device is further configured (A database request is made for the address and route for LAN B into the ADDRESS CACHE element 24 and DIRECTORY SERVICES element 22 these address in the tables provide detailed configuration information as shown in Fig 2); when a database reply corresponding to the database query for the calling client is received to establish a connection to a network device corresponding to the endpoint identifier including in the database reply (If the address is available in ADDRESS CACHE element 24 then the connection is made immediately per Figs 7- 9); when no database reply corresponding to the database query for the calling client is received the network device is configured to locally select a locally determined endpoint value and establish a connection for the client to a network device corresponding to the locally determined endpoint value (If there is not an address or identifier for the LAN B in the ADDRESS CACHE element 24 then a request is made locally from the ADDRESS CACHE element 24 to the DIRECTORY SERVICES element 22 per Fig 2. If the address for LAN B is not in the DIRECTORY SERVICES element 22 then query is made as shown in Fig 10 to ESTABLISH CONNECTION element 140 and CONNECTION TABLE UPDATE per Fig 10 which eventually will cause both the DIRECTORY SERVICES element 22 and ADDRESS CACHE element 24 is updated with the endpoint information so the connection can be established per Figs 1-10);

**In Addition:**

The network device is further configured to generate a database update when it establishes the connection for the client to the network device corresponding to the locally determined endpoint value, where the database update includes the client identifying information value for the client from which the call request is received and the locally determined endpoint



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value; and database is further configured, responsive to the database update to create a database entry having the client identifying information value for the client from which the call request is received and the locally determined endpoint value. (The WAN ACCESS NODE or element 15 as shown in Fig 2 for receiving a call request from a client. The WAN ACCESS NODE receives a connection request from LAN A element 11 to LAN B element 12 as shown in Fig 11. The WAN ACCESS NODE generates a database query having the client identifying information value for the client from the call request is received. A database request is made for the address and route for LAN B into the ADDRESS CACHE element 24 and DIRECTORY SERVICES element 22. If the address is available in ADDRESS CACHE element 24 then the connection is made immediately per Figs 7- 9. If there is not an address or identifier for the LAN B in the ADDRESS CACHE element 24 then a request is made locally from the ADDRESS CACHE element 24 to the DIRECTORY SERVICES element 22 per Fig 2. If the address for LAN B is not in the DIRECTORY SERVICES element 22 then query is made as shown in Fig 10 to ESTABLISH CONNECTION element 140 and CONNECTION TABLE UPDATE per Fig 10 which eventually will cause both the DIRECTORY SERVICES element 22 and ADDRESS CACHE element 24 is updated with the endpoint information so the connection can be established per Figs 1-10); as claimed in **Claim 11**.

EDO (WAN destination address per col 5 line 60) and username (MAC address per col 5 line 60) as claimed in **Claim 15**

The system further including another network device for receiving another call request from the client (Another terminal on LAN A desires to a communicate with another terminal on LAN B per Fig 1); responsive thereto, generate another database query having the client identifying information value for the client form which the another call request is received, and where the another network device is further configured when a database reply corresponding to the another database query for the calling client is received, to establish another connection to the network device corresponding to the endpoint identifier value included in the database reply corresponding to the endpoint identifier value included in the database reply corresponding to the another database query (A terminal connected to LAN A or element 11 in Figure 11 desires to

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communicate with terminal on LAN B or element 12 per Fig 11. In response to the connection for LAN A to communicate with LAN B, the ADDRESS CACHE 24 is queried for the path to LAN B based upon the ADDRESS of LAN A. If the ADDRESS for LAN B is found a connection is established per Figs 1-10. In response to the connection for LAN A to communicate with LAN B, the ADDRESS CACHE 24 is queried for the path to LAN B based upon the ADDRESS of LAN A. If the ADDRESS for LAN B is found a connection is established per Figs 1-10) as claimed in **Claim 16**

Derby does not particularly call for: endpoint identifier but teaches MAC Header per col 4 line 44 and WAN destination address per col 5 lines 60-61)

It would be obvious to one of ordinary skill in the art at the time of the invention that the endpoint identifier is a WAN destination address it performs the same function.

***Claim Rejections - 35 USC § 103***

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**9.0** Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Derby et al (U.S. Patent No.: 5,426,637) in view of Harper et al. (International Publication No.: W0 92/12587 dated July 23, 1992)

Referring to Claim 3, Derby teaches: the method of claim 2 where the step of the querying the remote database for predetermined identifying message identifier and predetermined identifying information for the client ( As shown in Figs 1-10);

Derby does not particularly teach: multicasting

Harper teaches: multicasting (col 7 line 2)

It would be obvious to add the multicasting of Harper to the system of Derby in order to build a LAN/WAN bridging apparatus.

**10.0**

***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Miki, U.S. Patent No.: 2002/0176414A1 dated November 28, 2002 which discloses tunneling system.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert W Wilson whose telephone number is 703/305-4102. The examiner can normally be reached on M-F (8:00-4:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Douglas Olms can be reached on (703) 305-4703. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9314 for regular communications and (703) 872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4700.



Robert W Wilson  
Examiner  
Art Unit 2661

RWW  
December 27, 2002



DANGLTON  
PATENT EXAMINER

### **DETAILED ACTION**

**1.0** The application of Janakiraman Senthilnathan et al for a "METHOD AND APPARATUS FOR SELECTION OF AN ENDPOINT DEVICE IN A POINT TO POINT LINK" filed October 29, 1999 without foreign priority and consisting of claims 1-19 have been examined.

#### ***Foreign Priority***

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#### ***Claim Objections***

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